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EXAMINER	
RASHID, DAVID	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/774,590	NONAKA ET AL.	
	Examiner	Art Unit	
	DAVID P. RASHID	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *See Continuation Sheet*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :2/10/2004; 11/28/2007; 7/15/2008; 7/15/2008.

DETAILED ACTION

[1] All of the examiner's suggestions presented hereinafter have been assumed for examination purposes, unless otherwise noted.

Priority

[2] Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d) (App. No. JP2003-036091, filed Feb. 10, 2004 and App. No. JP2003-036092, filed Feb. 10, 2004), which papers have been placed of record in the file.

Specification

[3] The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

[4] Applicant is advised that should **claim 1** be found allowable, **claims 3** and **4** will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. *See* MPEP § 706.03(k).

[5] **Claims 2, 5** and **7** are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claims, or amend the claims to place the claims in proper dependent form, or rewrite the claims in independent form.

(i) Claim 2, ll. 2-4 cites "wherein the decoding means decodes the target part to a degree that enables the correction means to carry out the image enhancement processing thereon" (*emphasis added*), but the decoding means must decode the target part "to a degree" for the correcting

means to carry out the image enhancement processing on the decoded means as already performed in claim 1.

(ii) Claim 5, ll. 4-5 cites "the decoding means further obtaining decoded intra blocks by decoding the intra blocks. . . ." The Examiner notes that the inter and intra frames of claim 4 are comprised of "blocks" (*i.e.*, an intra frame is composed of a plurality of intra blocks). Thus, the "decoding of intra frames" occurring in claim 4 is a one-to-one correspondence to "decoding the intra blocks" of claim 5. This frame-to-block reasoning is analogous to all the steps of claim 5, and hence claim 5 fails to further limit.

(iii) Claim 7 is objected to using an equivalent argument as in claim 5.

Claim Rejections - 35 USC § 101

[6] 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

[7] **Claims 1-11** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The means-plus-function language is invoked by 35 USC § 116 6th paragraph and supported by software/program enablement which is non-statutory. *See, e.g.* U.S. Pub. No. 2004/0160645 (providing "an image processing apparatus and a program" at ¶0011, (*emphasis added*) as supporting program enablement of the means-plus-function language of claims 1-2).

[8] **Claims 12-20** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

A judicial exception claim is non-statutory for solely embodying an abstract idea, natural phenomenon, or law of nature. *See* MPEP § 2106(IV)(C)(2). However, a practical application of a judicial exception claim is a § 101 statutory claim "when it:

(A) 'transforms' an article or physical object to a different state or thing [(*i.e.*, a physical transformation)]; or

(B) otherwise produces a useful, concrete and tangible result, based on the factors discussed below. . . ." *Id.*

An "article" is "a member of a class of things" which need not be physical. *See* Merrian-Webster Online, 2007-2008, "article" n. def. 3, *available at* http://www.m-w.com/dictionary. Though an article may not be physical, § 101 statutory transformations of such intangible articles must be physical transformations (*i.e.*, a physical component to the transformation must be involved). *See* MPEP § 2106(IV)(C)(2) (requiring the element "provides a transformation or reduction of an article to a different state of thing", a "practical application by physical transformation") *and* Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility, Official Gazette notice, 22 November 2005, Annex (II)(B)(iii); (III).

The Examiner believes that a "pixel" or "image data" is nothing more than a block of existing information as there is nothing tangible or physical about image data itself (*i.e.*, a pixel could be equivalent to the value "101", or signal representation of an image). Image data is more representative of an information value or signal (an image block more representative of an information matrix) than something tangible or physical.

Furthermore, a claim including a method-step for inputting or outputting a pixel or image data (image signal), but not indicating physically where the image data is sent does not indicate a physical transformation, nor a useful, concrete and tangible result. The claim would require

further information as to indicate physical location (*e.g.*, memory, display) for a complete physical transformation of an image signal (*e.g.*, pixel, image data) article. **Claims 12-20** are non-statutory for being a judicial exception, an abstract idea.

[9] The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

> Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.
>
> When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare In re Lowry, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and Warmerdam, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).
>
> In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

[10] **Claims 12-20** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claim 11-20 define a "program" embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of

the presently claimed "program" can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to embody the program on "computer-readable medium" or equivalent in order to make the claim statutory. Any amendment to the claim should be commensurate with its corresponding disclosure.

[11] MPEP § 2173.05 titled "PRODUCT AND PROCESS IN THE SAME CLAIM" reads, in relevant part:

> A single claim which claims both an apparatus and the method steps of using the apparatus is indefinite under 35 U.S.C. 112, second paragraph. *> *IPXL Holdings v. Amazon.com, Inc.*, 430 F.2d 1377, 1384, 77 USPQ2d 1140, 1145 (Fed. Cir. 2005);< *Ex parte Lyell*, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990) *>(< claim directed to an automatic transmission workstand and the method * of using it * held ** ambiguous and properly rejected under 35 U.S.C. 112, second paragraph>)<. Such claims *>may< also be rejected under 35 U.S.C. 101 based on the theory that the claim is directed to neither a "process" nor a "machine," but rather embraces or overlaps two different statutory classes of invention set forth in 35 U.S.C. 101 which is drafted so as to set forth the statutory classes of invention in the alternative only. *Id.* at 1551.

MPEP § 2173.05(n)(II).

Claims 12-20 are rejected under 35 U.S.C. 101, because they "claim[[s]] both an apparatus and the method steps of using the apparatus. . .and may also be rejected under 35 U.S.C. 101 based on the theory that the claim is directed to neither a 'process', nor a 'machine,' but rather embraces or overlaps two different statutory classes of invention. . ." *Id.*

Claim Rejections - 35 USC § 112

[12] The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

[13] **Claims 9-10** and **19** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9, l. 24 cites "and/or" but it is unclear whether it is "and" or "or" – suggest changing to "or" as assumed for examination purposes. Claims 10 and 19 are rejected by equivalent argument.

[14] **Claims 9-10** and **19** recite the limitation "the corresponding decoded frame". There is insufficient antecedent basis for this limitation in the claim.

[15] MPEP § 2173.05 titled "PRODUCT AND PROCESS IN THE SAME CLAIM" reads, in relevant part:

> A single claim which claims both an apparatus and the method steps of using the apparatus is indefinite under 35 U.S.C. 112, second paragraph. *> *IPXL Holdings v. Amazon.com, Inc.*, 430 F.2d 1377, 1384, 77 USPQ2d 1140, 1145 (Fed. Cir. 2005);< *Ex parte Lyell*, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990) *>(< claim directed to an automatic transmission workstand and the method * of using it * held ** ambiguous and properly rejected under 35 U.S.C. 112, second paragraph>)<. Such claims *>may< also be rejected under 35 U.S.C. 101 based on the theory that the claim is directed to neither a "process" nor a "machine," but rather embraces or overlaps two different statutory classes of invention set forth in 35 U.S.C. 101 which is drafted so as to set forth the statutory classes of invention in the alternative only. *Id.* at 1551.

MPEP § 2173.05(n)(II).

Claims 12-20 are rejected under 35 U.S.C. 112, second paragraph, because they "claim[[s]] both an apparatus and the method steps of using the apparatus." *Id.*

Claim Rejections - 35 USC § 102

[16] The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the

international application designated the United States and was published under Article 21(2) of such treaty in the English language.

[17] **Claims 1-2, 9, 12,** and **19** are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,594,311 (filed Jul. 29, 1998, *hereinafter* "Pearlstein").

Regarding **claim 1**, *Pearlstein* discloses an image processing apparatus (fig. 4) for obtaining processed compressed moving image data (*e.g.*, fig. 4, item 402) by carrying out image enhancement processing (fig. 5, item 458; *e.g.*, inserting uncompressed local image data) on compressed moving image data ("COMPRESSED VIDEO" at fig. 5; *e.g.*, fig. 3), the image processing apparatus comprising:

division means (fig. 5, item 454) for dividing the compressed moving image data ("COMPRESSED VIDEO" at fig. 5) into a target part to be corrected (the output of item 454 sent directly to item 456) and a non-target part not to be corrected (the output of item 454 sent directly to item 462);

decoding means (fig. 5, item 456) for obtaining decoded data by decoding the target part;

correction means (fig. 5, item 458) for obtaining corrected decoded data by carrying out the image enhancement processing (*e.g.*, inserting uncompressed local image data) on the decoded data;

encoding means (fig. 5, item 460) for encoding the corrected decoded data; and

combination means (fig. 5, item 462) for obtaining the processed compressed moving image data by combining the target part that has been encoded (upper input arrow into item 462) with the non-target part (lower input arrow into item 462).

Regarding **claim 2**, *Pearlstein* discloses the image processing apparatus according to claim 1, wherein the decoding means (fig. 5, item 456) decodes the target part (the output of item

454 sent directly to item 456) to a degree (it decodes "to a degree" such that the algorithm can be performed successfully) that enables the correction means (fig. 5, item 458) to carry out the image enhancement processing (fig. 5, item 458; *e.g.*, inserting uncompressed local image data) thereon.

Regarding **claim 9**, *Pearlstein* discloses an image processing apparatus (fig. 4) for obtaining processed compressed moving image data (*e.g.*, fig. 4, item 402) by carrying out image enhancement processing (fig. 5, item 458; *e.g.*, inserting uncompressed local image data) on compressed moving image data ("COMPRESSED VIDEO" at fig. 5; *e.g.*, fig. 3) comprising a plurality of frames, the image processing apparatus comprising:

division means (fig. 5, item 454) for dividing the compressed moving image data ("COMPRESSED VIDEO" at fig. 5) into target frames (the output of item 454 sent directly to item 456) and non-target frames (the output of item 454 sent directly to item 462);

decoding means (fig. 5, item 456) for obtaining decoded frames by decoding the target frames;

correction means (fig. 5, item 458) for obtaining corrected decoded frames by carrying out the image enhancement processing (*e.g.*, inserting uncompressed local image data) on the decoded frames;

encoding means (fig. 5, item 460) for encoding the corrected decoded frames; and

combination means (fig. 5, item 462) for obtaining the processed compressed moving image data by combining the corrected frames (upper input arrow into item 462) with the non-target part (lower input arrow into item 462);

correction parameter calculation means (fig. 5, item 458) for calculating a correction parameter (*e.g.*, the frame number parameter to signify "where the data to be inserted

corresponds to only a portion of the insertion segment or is intended to be, e.g., a transparent overlay. . ." at 7:48-54) for each of the decoded frames by using data of the corresponding decoded frames;

parameter adjustment means (fig. 5, item 458) for obtaining an adjusted parameter ("parameter adjustment" occurs when moving unto the next frame and obtaining the correction parameter for the next frame) for each of the decoded frames by adjusting (the correction parameter is "adjusted" when the correction parameter moves unto the next frame) the correction parameter thereof, with use of the correction parameter for the decoded frame or frames that precedes or follows the decoded frame corresponding to the correction parameter that is going to be adjusted (the correction parameter for overlay is information given for all frames decoded at item 456, and thus the correction parameter "adjusts" for preceding and following frames); and

correction execution means (fig. 5, item 458) for carrying out the image enhancement processing (*e.g.*, inserting uncompressed local image data) on each of the decoded frames by using the adjusted parameter (the next frame number (adjusted parameter) is used for the next frame).

Regarding **claim 12**, claim 1 recites identical features as in claim 12. Thus, references/arguments equivalent for claim 1 are equally applicable to claim 12.

Regarding **claim 19**, claim 9 recites identical features as in claim 19. Thus, references/arguments equivalent for claim 9 are equally applicable to claim 19.

Claim Rejections - 35 USC § 103

[18] The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

[19] **Claims 3** and **13** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Pearlstein* in further view of *Pearlstein*.

Regarding **claim 3**, while *Pearlstein* discloses an image processing apparatus (fig. 4) for obtaining processed compressed moving image data (*e.g.*, fig. 4, item 402) by carrying out image enhancement processing (fig. 5, item 458; *e.g.*, inserting uncompressed local image data) on compressed moving image data ("COMPRESSED VIDEO" at fig. 5; *e.g.*, fig. 3), the image processing apparatus comprising:

division means (fig. 5, item 454) for dividing the compressed moving image data ("COMPRESSED VIDEO" at fig. 5) into a first frame (the output frame(s) of item 454 sent directly to item 456; any one of the multiple frames sent to item 456 may be called a first frame reference) and other frames (the output frame(s) of item 454 sent directly to item 462 which is not a first frame);

decoding means (fig. 5, item 456) for obtaining decoded data by decoding the target part;

correction means (fig. 5, item 458) for obtaining corrected decoded data by carrying out the image enhancement processing (*e.g.*, inserting uncompressed local image data) on the decoded data;

encoding means (fig. 5, item 460) for encoding the corrected decoded data; and

combination means (fig. 5, item 462) for obtaining the processed compressed moving image data by combining the target part that has been encoded (upper input arrow into item 462) with the non-target part (lower input arrow into item 462), *Pearlstein* does not teach image

enhancement processing on compressed moving image data obtained according to a compression method using a first frame as a reference frame.

Pearlstein teaches image enhancement processing ("high compression efficiency" at 1:43) on compressed moving image data (*e.g.*, fig. 2) obtained according to a compression method using a first frame as a reference frame ("reference frame" at 1:43-67 and 2:13-28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the frame of *Pearlstein* to be a first frame used as a reference frame as taught by *Pearlstein* "[i]n order to obtain high compression efficiency" (*Pearlstein*, 1:43) and "to perform the local insertion of picture content within emerging digital television networks" (*Pearlstein*, 1:35-37).

Regarding **claim 13**, claim 3 recites identical features as in claim 13. Thus, references/arguments equivalent for claim 3 are equally applicable to claim 13.

[20] **Claims 4-5, 8, 11, 14-15, 18,** and **20** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Pearlstein* in view of U.S. Patent No. 5,991,503 (issued Nov. 23, 1999, *hereinafter* "Miyasaka et al.").

Regarding **claim 4**, while *Pearlstein* discloses an image processing apparatus (fig. 4) for obtaining processed compressed moving image data (*e.g.*, fig. 4, item 402) by carrying out image enhancement processing (fig. 5, item 458; *e.g.*, inserting uncompressed local image data) on compressed moving image data ("COMPRESSED VIDEO" at fig. 5; *e.g.*, fig. 3) comprising a first set of frames and a second set of frames, the image processing apparatus comprising:

division means (fig. 5, item 454) for dividing the compressed moving image data ("COMPRESSED VIDEO" at fig. 5) into the first set of frames (the output frame(s) of item 454 sent directly to item 456; any one of the multiple frames sent to item 456 may be called a first

frame reference) and the second set of frames (the output frame(s) of item 454 sent directly to item 462 which is not a first frame);

decoding means (fig. 5, item 456) for obtaining decoded data by decoding the first set of frames and the second set of frames;

correction means (fig. 5, item 458) for obtaining corrected decoded data by carrying out the image enhancement processing (*e.g.*, inserting uncompressed local image data) on the first set of frames;

encoding means (fig. 5, item 460) for encoding the corrected the first set of frames; and

combination means (fig. 5, item 462) for obtaining the processed compressed moving image data by combining the first set of frames that has been encoded (upper input arrow into item 462) with the second set of frames (lower input arrow into item 462), *Pearlstein* does not teach wherein the division means divides compressed moving image data into the intra frames and the inter frames.

Miyasaka et al. teaches a division means for dividing the compressed moving image data into the intra frames and the inter frames ("a method for decoding only the intra-frame encoded data" at 4:29-31).

Because both *Pearlstein* and *Miyasaka et al.* teach methods for dividing a compressed moving image, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the first set of frames with intra frames, and the second set of frames with inter frames to achieve the predictable result of "provid[ing] a method for performing a special reproducing operation of picture data in an effective and simple manner without the need to increase the storage capacity of a storage medium.", *Miyasaka et al.*, 2:49-52.

Regarding **claim 5**, *Pearlstein* in view of *Miyasaka et al.* discloses (*see* claim objection for failure to further limit) the image processing apparatus according to claim 4 further comprising block division means (*Pearlstein*, fig. 5, item 454) for dividing the inter frames into intra blocks and inter blocks (frames are divided at item 454 (*see* claim 4), thus since frames are divided so are their blocks because frames are comprised of blocks),

the decoding means (*Pearlstein*, fig. 5, item 456) further obtaining decoded intra blocks by decoding the intra blocks,

the correction means (*Pearlstein*, fig. 5, item 458) further obtaining corrected decoded intra blocks by carrying out the image enhancement processing on the decoded intra blocks,

the encoding means (*Pearlstein*, fig. 5, item 460) further obtaining corrected intra blocks by encoding the corrected decoded intra blocks, and

the combination means (*Pearlstein*, fig. 5, item 462) obtaining the processed compressed moving image data by combining the corrected intra frames and the corrected intra blocks with the inter blocks.

Regarding **claim 8**, while *Pearlstein* discloses image processing apparatus (fig. 4) for obtaining processed compressed moving image data (*e.g.*, fig. 4, item 402) by carrying out image enhancement processing (fig. 5, item 458; *e.g.*, inserting uncompressed local image data) on compressed moving image data mainly comprising DCT coefficient data and motion vector data ("MPEG" comprises DCT coefficient data and motion vector data; "COMPRESSED VIDEO" at fig. 5; *e.g.*, fig. 3) of each frame, the image processing apparatus comprising:

extraction means (fig. 4, item 405-406 wherein the motion vector data is taken to create subregions that will later be separated at parser item 454) for extracting the motion vector data from the compressed moving image data (fig. 4, item 405);

decoding means (fig. 5, item 456) for obtaining decoded data by decoding the compressed moving image data with use of the motion vector data;

correction means (fig. 5, item 458) for obtaining corrected decoded data by carrying out the image enhancement processing (*e.g.*, inserting uncompressed local image data) on the decoded data; and

encoding means (fig. 5, item 460) for obtaining the processed compressed moving image data by encoding the corrected decoded data, wherein

the encoding means (fig. 5, item 460) encodes the corrected decoded data by using the motion vector data (lower input arrow into item 462) obtained by the extraction means, *Pearlstein* does not disclose extracting and decoding the DCT coefficient data from the compressed moving image data.

Miyasaka et al. teaches extracting and decoding DCT coefficient data (fig. 3, item 54) from the compressed moving image data (fig. 3, item 11).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the image processing apparatus of *Pearlstein* to include extracting and decoding the DCT coefficient data from the compressed moving image data as taught by *Miyasaka et al.* "to provide a method for performing a special reproducing operation of picture data in an effective and simple manner without the need to increase the storage capacity of a storage medium", *Miyasaka et al.*, 2:49-52.

Regarding **claim 11**, *Pearlstein* discloses an image processing apparatus (fig. 4) for obtaining processed compressed moving image data (*e.g.*, fig. 4, item 402) by carrying out image enhancement processing (fig. 5, item 458; *e.g.*, inserting uncompressed local image data) on

compressed moving image data ("COMPRESSED VIDEO" at fig. 5; *e.g.*, fig. 3) comprising a first set of frames and a second set of frames, the image processing apparatus comprising:

division means (fig. 5, item 454) for dividing the compressed moving image data ("COMPRESSED VIDEO" at fig. 5) into the first set of frames (the output frame(s) of item 454 sent directly to item 456; any one of the multiple frames sent to item 456 may be called a first frame reference) and the second set of frames (the output frame(s) of item 454 sent directly to item 462 which is not a first frame);

decoding means (fig. 5, item 456) for obtaining decoded data by decoding the first set of frames and the second set of frames;

correction means (fig. 5, item 458) for obtaining corrected decoded data by carrying out the image enhancement processing (*e.g.*, inserting uncompressed local image data) on the first set of frames;

encoding means (fig. 5, item 460) for encoding the corrected the first set of frames; and

combination means (fig. 5, item 462) for obtaining the processed compressed moving image data by combining the first set of frames that has been encoded (upper input arrow into item 462) with the second set of frames (lower input arrow into item 462),

the correction means (fig. 5, item 458) carries out the image enhancement processing (*e.g.*, inserting uncompressed local image data) on the first set of frames by calculating a correction parameter (*e.g.*, the frame number parameter to signify "where the data to be inserted corresponds to only a portion of the insertion segment or is intended to be, e.g., a transparent overlay. . ." at 7:48-54) therefor and on the first set of frames by using the correction parameter of the decoded first set of frames that immediately precedes the decoded first set of frames (the correction parameter for overlay is information given for all frames decoded at item 456, and

thus the correction parameter "adjusts" for preceding and following frames), *Pearlstein* does not teach wherein the division means divides compressed moving image data into the intra frames (of which some would include target and non-target) and the inter frames (of which some would include target and non-target).

Miyasaka et al. teaches a division means for dividing the compressed moving image data into the intra frames (of which some would include target and non-target frames) and the inter frames ("a method for decoding only the intra-frame encoded data" at 4:29-31; of which some would include target and non-target frames).

Because both *Pearlstein* and *Miyasaka et al.* teach methods for dividing a compressed moving image, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the first set of frames with intra frames, and the second set of frames with inter frames to achieve the predictable result of "provid[ing] a method for performing a special reproducing operation of picture data in an effective and simple manner without the need to increase the storage capacity of a storage medium.", *Miyasaka et al.*, 2:49-52.

Regarding **claim 14**, claim 4 recites identical features as in claim 14. Thus, references/arguments equivalent for claim 4 are equally applicable to claim 14.

Regarding **claim 15**, claim 5 recites identical features as in claim 15. Thus, references/arguments equivalent for claim 5 are equally applicable to claim 15.

Regarding **claim 18**, claim 8 recites identical features as in claim 18. Thus, references/arguments equivalent for claim 8 are equally applicable to claim 18.

Regarding **claim 20**, claim 11 recites identical features as in claim 20. Thus, references/arguments equivalent for claim 11 are equally applicable to claim 20.

[21] **Claims 6-7** and **16-17** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Pearlstein* in view of U.S. Pub. No. 2001/0033737 (filed Mar. 5, 2001, *hereinafter* "Honjo").

Regarding **claim 6**, while *Pearlstein* discloses an image processing apparatus (fig. 4) for obtaining processed compressed moving image data (*e.g.*, fig. 4, item 402) by carrying out image enhancement processing (fig. 5, item 458; *e.g.*, inserting uncompressed local image data) on compressed moving image data ("COMPRESSED VIDEO" at fig. 5; *e.g.*, fig. 3) comprising a first set of frames and a second set of frames, the image processing apparatus comprising:

division means (fig. 5, item 454) for dividing the compressed moving image data ("COMPRESSED VIDEO" at fig. 5) into the first set of frames (the output frame(s) of item 454 sent directly to item 456; any one of the multiple frames sent to item 456 may be called a first frame reference) and the second set of frames (the output frame(s) of item 454 sent directly to item 462 which is not a first frame);

decoding means (fig. 5, item 456) for obtaining decoded data by decoding the first set of frames and the second set of frames;

correction means (fig. 5, item 458) for obtaining corrected decoded data by carrying out the image enhancement processing (*e.g.*, inserting uncompressed local image data) on the first set of frames;

encoding means (fig. 5, item 460) for encoding the corrected the first set of frames; and

combination means (fig. 5, item 462) for obtaining the processed compressed moving image data by combining the first set of frames that has been encoded (upper input arrow into item 462) with the second set of frames (lower input arrow into item 462), *Pearlstein* does not teach wherein the division means divides compressed moving image data into the intra frames and the inter frames.

Honjo teaches a division means for dividing the compressed moving image data into I frames, P frames, and B frames (the disclosed MPEG system must divide into I, P, and B frames), and decoding means for decoding I and P frames ("decoding only I frames and P frames" at ¶0066).

Because both *Pearlstein* and *Miyasaka et al.* teach methods for dividing a compressed moving image, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the first set of frames with I and P frames, and the second set of frames with B frames to achieve the predictable result of "provid[ing] a method for performing a special reproducing operation of picture data in an effective and simple manner without the need to increase the storage capacity of a storage medium.", *Miyasaka et al.*, 2:49-52.

Regarding **claim 7**, *Pearlstein* in view of *Miyasaka et al.* discloses (*see* claim objection for failure to further limit) the image processing apparatus according to claim 6 further comprising block division means (*Pearlstein*, fig. 5, item 454) for dividing the B frames into intra blocks and inter blocks (frames are divided at item 454 (*see* claim 6), thus since frames are divided so are their blocks because frames are comprised of blocks),

the decoding means (*Pearlstein*, fig. 5, item 456) further obtaining decoded intra blocks by decoding the intra blocks,

the correction means (*Pearlstein*, fig. 5, item 458) further obtaining corrected decoded intra blocks by carrying out the image enhancement processing on the decoded intra blocks,

the encoding means (*Pearlstein*, fig. 5, item 460) further obtaining corrected intra blocks by encoding the corrected decoded intra blocks, and

the combination means (*Pearlstein*, fig. 5, item 462) obtaining the processed compressed moving image data by combining the corrected I frames, the corrected P frames, and the corrected intra blocks with the inter blocks.

Regarding **claim 16**, claim 6 recites identical features as in claim 16. Thus, references/arguments equivalent for claim 6 are equally applicable to claim 16.

Regarding **claim 17**, claim 7 recites identical features as in claim 17. Thus, references/arguments equivalent for claim 7 are equally applicable to claim 17.

Conclusion

[22] The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 6181743 B1; US 20020059643 A1; US 20020067768 A1; US 6415055 B1; US 20020114397 A1; US 20020136310 A1; US 20020181595 A1; and US 20020186769 A1,

[23] Any inquiry concerning this communication or earlier communications from the examiner should be directed to David P. Rashid whose telephone number is (571) 270-1578. The examiner can normally be reached Monday - Friday 8:30 - 17:00 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vikkram Bali can be reached on (571) 272-7415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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